Table 01 Capacitor Screening Requirements (Page 1 of 3)

Inspection/Test	Test Methods, Conditions and Requirement (Note 1)	Part Type/Grade Level													
		Ceramic		Plastic		Tantalum		Glass		Mica		Variable		RFI Feed-Thru		Switch Mode Power Supply	
		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
1. a. Visual and mechanical Examination. b. Electrical Measurements	Optional for all grades. Same as step 10 and step 5.																
2. Thermal Shock	MIL-STD-202, Method 107, Condition B, -55°C to +125°C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3. Voltage Conditioning (Burn-In)	2 x Rated Voltage, 125°C, 160 hours	X	X							X	X				X	X	X
	140% rated voltage, 125°C, 48 hours			X	X												
	1.2 x rated AC voltage at maximum rated frequency, 160 hours													X	X		
	Rated voltage 85°C, 48 hours					X	X										
	3 x rated voltage room temp., 48 hours							X	X								
4. Surge Current	MIL-C-39003/10					X											
5. High Impedance temp. and voltage ramp (Note 2)	5 cycles, -55°C to 100°C in accordance with MIL-C-872147 4.7.4			X													

See notes on page C-3.

Table 01 Capacitor Screening Requirements (Page 2 of 3)

Inspection/Test	Test Methods, Conditions and Requirement (Note 1)	Part Type/Grade Level															
		Ceramic		Plastic		Tantalum		Glass		Mica		Variable		RFI Feed-Thru		Switch Mode Power Supply	
		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
6. Electrical measurements	As specified. (Note 3)																
Capacitance	MIL-STD-202, Method 305	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dissipation Factor		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DWV	MIL-STD-202, Method 301	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Insulation Resistance 1	MIL-STD-202, Method 302	X	X	X	X			X	X	X	X	X	X	X	X	X	X
Insulation Resistance 2	Repeat at 125°C	X		X		X		X		X		X		X		X	
DC Leakage 1	MIL-STD-202, Method 301					X	X										
DC Leakage 2	Repeat at 85°C					X											
Equivalent Series Resistance						X	X										
Quality Factor												X	X				
Driving Torque												X	X				
Insertion Loss														X	X		
7. Percent Defective Allowable	5% for Grade 1 10% for Grade 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
8. Partial Discharge (Note 4)	MIL-C-49467 Appendix B	X	X														
9. Seal Test (Hermetic Types Only)	MIL-STD-202, Method 112																
Gross Leak	Condition A or B			X	X	X	X							X	X		
Fine Leak	Condition C			X		X								X			
10. Radiographic Inspection	MSFC-STD-355C	X		X		X				X		X		X		X	
11. Visual and Mechanical Examination	Dimensions, Marking, Workmanship	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12. Humidity Steady State, Low Voltage (Note 5)	MIL-STD-202, Method 103, Condition A and MIL-C-123, Pargraph 4.6.16.1	5(0)	5(0)													5(0)	5(0)

See notes on page C-3.

Table 01 Capacitor Screening Requirements (Page 3 of 3)

Notes:

1. User should refer to the nearest equivalent military specification listed in Table 01A if required for better definition of testing requirements.
2. Required only for metallized polycarbonate low energy, high impedance capacitors similar to those specified by MIL-C-87217.
3. It is the responsibility of the user to define minimum and maximum values for each parameter (pass/fail criteria) and delta criteria, if applicable. These values should be based on the nearest equivalent military specification, manufacturer specifications, or the application, whichever is most stringent.
4. Required only for high voltage capacitors similar to those specified by MIL-C-49467. This test requirement may affect capacitor design and should be performed by the manufacturer. If performed only by the user, it could result in a high probability of failure.
5. Required only for capacitors with applied voltage of 10 volts or less. Five parts shall be tested with zero failures allowed.

Table 01A Equivalent Military Specifications

Ceramic MIL-C-123 MIL-C-39014 MIL-C-49467 Multilayer, High Voltage MIL-C-55681 Chip, Multiple Layer MIL-C-49464 Chip, Parallel Plate	**Glass** MIL-C-23269 **Mica** MIL-C-39001 MIL-C-87164
Plastic (Paper Plastic) MIL-C-55514 Nonmetal MIL-C-83421 Metallized, Hermetic MIL-C-87217 Supermetallized, Low Energy High Impedance	**Filter** MIL-C-83439 EMI Suppression MIL-F-28861 **Variable** MIL-C-14409 Piston, Tubular Trimmer
Tantalum MIL-C-39003 Solid Electrolyte MIL-C-39006 Nonsolid Electrolyte MIL-C-83500 Nonsolid Electrolyte MIL-C-55365 Chip	**Switch Mode Power Supply** DESC 87106